

Claims

1. A reverse flow filter system (3) having

- a reverse flow filter with an inlet (5) for a liquid to be prepared containing the substances to be separated, with an outlet (7) conducting the filtrate as prepared liquid to an associated liquid system (23), and with an outlet (9) for reverse flow volumes charged with separated substances,
- a closing valve (13) for closing and opening the outlet (9) for the reverse flow volumes,
- a filter mechanism (33) for separation of residual liquid from a mud-like mass which contains substances separated in the separating device (1), and
- an assembly (35) for return of the residual liquid to the liquid system (23) as prepared liquid,

characterized in that

- a separating device is present for separating solids from the reverse flow volume, having
 - a spinning screen in the form of a drum screen (17) with annular screen wall (21),

- a spray tube (15) conducting the liquid to the drum screen (17), which spray tube (15), with respect to its opening (26), extends at least in approximation tangentially on the inside of the screen wall (21) of the drum screen (17) in order to generate a spin flow of the liquid on the screen wall (21) and is connected by way of a line to the outlet (9) for the reverse flow volume,
 - a housing (19) enclosing the drum screen (17) to receive liquid penetrating the screen wall (21), and
 - an outlet (29) positioned on the bottom (27) of the drum screen (17) for discharge of the substances separated, and in that
- the separating device is mounted upstream from the filter mechanism.
2. The reverse flow filter system as claimed in claim 1, wherein the outlet (29) on the bottom (27) of the drum screen (17) has a mechanism (31) for conducting away the mud-like mass which has sunken to the bottom (27) of the drum screen (17) and contains the substances separated.
 3. The reverse flow filter system as claimed in claim 2, wherein the mechanism for conducting away the mud-like mass has, positioned on an opening (29) in the bottom (27), a length of pipe (31) inclining downward, preferably a vertical length of pipe (31), for conducting away the mud-like mass under the force of gravity.

4. The reverse flow filter system as claimed in claim 3, wherein there is provided on the lower end of the length of pipe (31) the filter mechanism (33) receiving the mud-like mass for separation of the residual liquid present in the mud-like mass from the substances separated.
5. The reverse flow filter system as claimed in claim 3, wherein the lower end of the length of pipe (31) is provided with a motor-driven conveying mechanism (37, 39) for conducting away the mud-like mass.
6. The reverse flow filter system as claimed in claim 5, wherein the conveying mechanism has a rotatable helical conveyor (39) in a conveyance housing (37) and wherein a filter mechanism is associated with the conveyance housing (37) in order to separate residual liquid from the mud-like mass.
7. The reverse flow filter system as claimed in one of claims 1 to 6, wherein the closing valve (13) is configured as a rapidly opening valve.
8. The reverse flow filter system as claimed in one of claims 1 to 7, wherein the liquid system has a tank (23) associated with a hydraulic system to which tank the filtrate may be conducted from the outlet (7) of the reverse flow filter as prepared liquid and which is connected to the filter mechanism (33) of the separating device (1) for conduct of the discharged residual liquid, and wherein a secondary flow fine filter mechanism (47, 49) is connected to the tank (23).